Journal of the
AMERICAN SOCIETY for INFORMATION SCIENCE
JASIS

Contents

Volume 45, 1994

Issue 1, January 1994

RESEARCH

Causal Relationship between Article Citedness and Journal Impact
Per O. Seglen 1

The Relationship between Recall and Precision
Michael Buckland and Fredric Gey 12

Toward a User-Centered Information Service
Ruth C.T. Morris 20

The Intellectual Base and Research Fronts of *JASIS* 1986–1990
Olle Persson 31

On Determinants of Citation Scores: A Case Study in Chemical Engineering
H.P.F. Peters and A.F.J. van Raan 39

The Effects of Noisy Data on Text Retrieval
Kazem Taghva, Julie Borsack, Allen Condit, and Srinivas Erva 50

LETTERS TO THE EDITOR 59

Issue 2, March 1994

RESEARCH

Citation-Based Auditing of Academic Performance
Blaise Cronin and Kara Overfelt 61

Electronic Publishing of Professional Articles: Attitudes of Academics and Implicatons for the Scholarly Communication Industry
Don Schauder 73

A Model for Library Book Circulations Incorporating Loan Periods
Quentin L. Burrell and Michael R. Fenton 101

BOOK REVIEWS 117

Issue 3, April 1994

EDITORIAL

Special Topics Issues of *Jasis*
Doanld H. Kraft 123

SPECIAL TOPIC ISSUE: RELEVANCE RESEARCH

Relevance Reconsidered—Towards an Agenda for the 21st Century: Introduction to Special Topic Issue on Relevance Research
Thomas J. Froehlich 124

Toward a Theory of User-Based Relevance: A Call for a New Paradigm of Inquiry
Taemin Kim Park 135

A Cognitive View of the Situational Dynamism of User-Centered Relevance Estimation
Harry W. Bruce 142

User-Defined Relevance Criteria: An Exploratory Study
Carol L. Barry 149

Other People's Judgments: A Comparison of Users' and Others' Judgments of Document Relevance, Topicality, and Utility
Joseph W. Janes 160

Pertinence as Reflected in Personal Constructs
Dara Lee Howard 172

The Role of Attorney Mental Models of Law in Case Relevance Determinations: An Exploratory Analysis
Stuart A. Sutton 186

Relevance and Retrieval Evaluation: Perspectives from Medicine
William Hersh 201

The Relevance of Recall and Precision in User Evaluation
Louise T. Su 207

BOOK REVIEWS 218

Issue 4, May 1994

RESEARCH

A Model for the Evaluation of Expansion Techniques in Information Retrieval Systems
Philippe Aigrain and Véronique Longueville 225

Visions of Xanadu: Paul Otlet (1868–1944) and Hypertext
W. Boyd Rayward 235

Task-Oriented Access to Data Files: An Evaluation
Carolyn Watters, Michael A. Shepherd, and Liwen Qiu 251

The Fractal Nature of Relevance: A Hypothesis
J. S. Ottaviani 263

The Breakeven Point for Using CD-ROM versus Online: A Case Study for Database Access in a Developing Country
Bahaa El-Hadidy 273

BOOK REVIEWS 284

Issue 5, June 1994

RESEARCH

The Performance of Cited References as an Approach to Information Retrieval
Lanju Lee Yoon 287

MUCH Electronic Publishing Environment: Principles and Practices
Zheng Min and Roy Rada 300

BOOK REVIEWS 310

LETTERS TO THE EDITOR 317

PERSPECTIVES ON ...

The Redesign/Reengineering of an Information Services Division in a Major Health Sciences Institution

Introduction and Overview
Marion J. Ball and Judith V. Douglas 320

Information Technology and the University: Integration Strategies for the 21st Century
Donald N. Langenberg 323

Information Services at the University of Maryland at Baltimore: Giving the Vision Life
Marion J. Ball and Errol L. Reese 326

Reassessing User Needs
Donald E. Harris 331

Redeploying Resources
S. Paul Petroski 335

Realigning and Reeducating Staff
Thomas E. Sappington 339

Designing a New Facility for Information Services
Frieda O. Weise and M. J. Tooey 342

Issue 6, July 1994

SPECIAL TOPIC ISSUE: INFORMATION RESOURCES AND DEMOCRACY

GUEST EDITOR: LEAH A. LIEVROUW

Information Resources and Democracy: Understanding the Paradox
Leah A. Lievrouw 350

The Autopoietic State: Communication and Democratic Potential in the Net
Sandra Braman 358

Information ↔ Democracy: An Examination of Underlying Assumptions
Brenda Dervin 369

Media Use and Political Efficacy: The Suburbanization of Race and Class
John E. Newhagen 386

Access to Information Technologies among School-Age Children: Implications for a Democratic Society
Michael E. Martinez 395

The PEN Project in Santa Monica: Interactive Communication, Equality, and Political Action
Everett M. Rogers, Lori Collins-Jarvis, and Joseph Schmitz 401

The International Telephone Network and Democratization
Su-Lien Sun and George A. Barnett 411

RESEARCH

Special Features of the Author–Publication Relationship and a New Explanation of Lotka's Law Based on Convolution Theory
L. Egghe 422

Federal Research Impact Assessment: State-of-the-Art
Ronald N. Kostoff 428

ERRATUM 441

Issue 7, August 1994

RESEARCH

An Analysis of Performance and Cost Factors in Searching Large Text Databases Using Parallel Search Systems
T. R. Couvreur, R. N. Benzel, S. F. Miller, D. N. Zeitler, D. L. Lee, M. Singhal, N. Shivaratri, and W. Y. P. Wong 443

Operationalizing the Notion of Information as a Subjective Construct
Charles Cole 465

An Analysis of Personal Journal Subscriptions of University Faculty. Part II. Arts and Professional Programs
Ernst J. Schuegraf and Martin F. van Bommel 477

The Social Shaping of Videotex: How Information Services for the Public Have Evolved
Donald O. Case 483

What Is Used during Cognitive Processing in Information Retrieval and Library Searching? Eleven Sources of Search Information
Dee Andy Michel 498

Multimedia and Comprehension: A Cognitive Study
Andrew Large, Jamshid Beheshti, Alain Breuleux, and André Renaud 515

User Preferences for Features in Back of Book Indexes
Virgil Diodato 529

BRIEF COMMUNICATION

Tiered Citation and Measures of Document Similarity
Blaise Cronin 537

BOOK REVIEW

Access versus Assets: A Comprehensive Guide to Resource Sharing for Academic Librarians, by Barbra Buckner Higgenbotham and Sally Bowdoin
Mary Ellen Heinan 539

LETTERS TO THE EDITOR 540

Issue 8, September 1994

GUEST EDITORIAL

***JASIS:* A Reflection Ten Years After**
Charles T. Meadow 545

IN MEMORIAM

Bernard M. Fry, 1915–1994
Charles H. Davis 547

RESEARCH

Comparing Words, Stems, and Roots as Index Terms in an Arabic Information Retrieval System
Ibrahim A. Al-Kharashi and Martha W. Evens 548

BRIEF COMMUNICATION

Extending Retrieval Strategies to Networked Environments: Old Ways, New Ways, and a Critical Look at WAIS
Gary Marchionini, Diane Barlow, and Linda Hill 561

BOOK REVIEWS

Online Retrieval: A Dialogue of Theory and Practice, by Geraldene Walker and Joseph Janes
Amanda Spink 565

Adaptive Technologies for Learning and Work Environments, by Joseph J. Lazzaro
Daniel Hilton-Chalfen 565

LETTERS TO THE EDITOR 567

ERRATUM 568

PERSPECTIVES ON ... Indexing

Introduction and Overview
Lois F. Lunin and Raya Fidel 570

User-Centered Indexing
Raya Fidel 572

Needs for Research in Indexing
Jessica L. Milstead 577

Some Isses in the Indexing of Images
Sara Shatford Layne 583

Indexing and Retrieval Performance: The Logical Evidence
Dagobert Soergel 589

Access to Nonbook Materials: The Limits of Subject Indexing for Visual and Aural Languages
Elaine Svenonius 600

Indexing for the Humanities
Helen R. Tibbo 607

Book and Periodical Indexing
Hans H. Wellisch 620

Standards for Indexing: Revising the American National Standard Guidelines Z39.4
James D. Anderson 628

Issue 9, October 1994

SPECIAL TOPIC ISSUE: SPATIAL INFORMATION

GUEST EDITOR: MYKE GLUCK

Spatial Information and Information Science: Introduction to *JASIS'* Special Topic Issue on Spatial Information
Myke Gluck 640

GIPSY: Automated Geographic Indexing of Text Documents
Allison Gyle Woodruff and Christian Plaunt 645

Spatial Mental Models from Descriptions
Barbara Tversky, Nancy Franklin, Holly A. Taylor, and David J. Bryant 656

Requirements for the Development of GIS-Based Group Decision-Support Systems
Marc P. Armstrong 669

The Role of Spatial Information Systems in Environmental Emergency Management
Lawrence G. Mondschein 678

An Example of the Estimation and Display of a Smoothly Varying Function of Time and Space—The Incidence of the Disease Mumps
William F. Eddy and Audris Mockus 686

Object-Oriented Modeling of Geographic Data
Eliseo Clementini and Paolino Di Felice 694

Proposal for a Spatial Organization Model in Soil Science (The Example of the European Communities Soil Map)
D. King, J. Daroussin, and M. Jamagne 705

BOOK REVIEWS

Challenges in Indexing Electronic Text and Images, edited by Raya Fidel, Trudi Bellardo Hahn, Edie M. Rasmussen, and Philip J. Smith
Bella Haas Weinberg 718

Strategic Management for Academic Libraries, by Robert M. Hayes
G. Edward Evans 723

Issue 10, December 1994

CONTENTS

EDITORIAL

Electronic Submissions to *JASIS* Are Now Acceptable
Donald H. Kraft 725

PERSPECTIVES ON ... Electronic Publishing

GUEST EDITOR: ROBIN P. PEEK

Introduction and Overview
Robin P. Peek 727

Where Is Publishing Going? A Perspective on Change
Robin P. Peek 730

The Integrity of Digital Information: Mechanics and Definitional Issues
Clifford A. Lynch 737

The Electronic Publishing Revolution Is Not "Global"
Thomas L. Jacobson 745

Boon or Bust? Access to Electronic Publishing by Individuals Using Adaptive Computer Technology
Jane Berliss 753

An Electronic Publishing Model for Academic Publishers
Jon D. Gold 760

Comserve: Moving the Communication Discipline Online
Timothy Stephen and Teresa M. Harrison 765

IPCT Journal: A Case Study of an Electronic Journal on the Internet
Mauri P. Collins and Zane L. Berge 771

Primary Science on CD-ROM: The New Zealand Experiment
Jaap A. Jasperse 777

The National Information Infrastructure and Electronic Publishing: A Reflective Essay
Philip Doty and Ann P. Bishop 785

BOOK REVIEW

Information Retrieval Today, by F. Wilfrid Lancaster and Amy J. Warner
Terrence A. Brooks 800

ERRATUM 802

AUTHOR INDEX 807

SUBJECT INDEX 811

VOLUME CONTENTS I